

**REMARKS**

**I. Introduction**

In response to the August 14, 2006 Office Action, Applicants have incorporated the limitations of claims 3 and 5 into both claims 1 and 16 to further clarify the subject matter of the present invention. Claims 3 and 5 have been cancelled, without prejudice. Claim 4 has been amended to be dependent upon claim 1. No new matter has been added.

For the reasons set forth below, Applicants respectfully submit that all pending claims are patentable over the cited prior art references.

**II. The Rejection Of Claims 1-16 Under 35 U.S.C. § 102**

Claims 1-6, 8, 9, 12, 14 and 15 were rejected under 35 U.S.C. § 102(b) as being anticipated by Washington et al. (USP No. 5,750,281); claims 1, 2, 6-10 and 16 were rejected under 35 U.S.C. § 102(b) as being anticipated by Middleman et al. (WO 01/80339); and claims 1, 2, 6-13 and 16 were rejected under 35 U.S.C. § 102(b) as being anticipated by Tanemoto et al. (EP 1020941). As claims 1 and 16 are the only independent claims pending in the application, and as the limitations of claims 3 and 5 were incorporated into claims 1 and 16, Applicants will address the rejection of claim 5, as claim 5 was originally dependent upon claim 3. Applicants respectfully submit that Washington, Middleman and Tanemoto each fail to anticipate the pending claims for at least the following reasons.

With regard to the present invention, amended claims 1 and 16 recite, in-part, a separator plate for a polymer electrolyte fuel cell or a polymer electrolyte fuel cell...wherein said separator plate or each of said separator plates comprises: an electronic conductor portion containing

conductive carbon; an insulating portion surrounding said electronic conductor portion, and a third portion between said electronic conductor portion and said insulating portion, wherein said third portion comprises a mixture of a material used in said electronic conductor portion and a material used in said insulating portion.

In contrast to the present invention, none of the cited prior art references teach or suggest that the third portion of the separator plate between the electronic conductor portion and the insulating portion is formed of a mixture of a material used in the electronic conductor portion and the insulating portion. Nor does the Examiner allege that the references contain the above-cited limitations. The Office Action is silent with respect to a disclosure of the material comprising the third portion. Furthermore, Washington discloses that the portion thereof that could be alleged to correspond to the third portion is comprised of a “gap-filling anaerobic adhesive...for example, commercially available LOCTITE epoxy compounds” (see, Washington, col. 8, lines 54-57). In addition, the manifold plates 120 of Washington (the alleged insulating portion) are formed from moldable, electrically insulating material such as thermoset or thermoplastic material (see, col. 6, line 66-col. 7, line 1 of Washington). Thus, as these two materials expressly taught by Washington are of differing compositions, it is submitted that Washington clearly fails to disclose that the third portion is comprised of a mixture of material used in the electronic conductor portion and the insulating portion. Furthermore, there is no mention in Washington of the composition of the material that comprises the electronic conductor portions (cathode plate 108 and anode plate 112). Tanemoto and Middleman also appear silent with respect to the composition of the third portion.

As anticipation under 35 U.S.C. § 102 requires that each element of the claim in issue be found, either expressly described or under principles of inherency, in a single prior art reference,

*Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 USPQ 781 (Fed. Cir. 1983), and at a minimum, Washington, Middleman and Tanemoto do not disclose a separator plate for a polymer electrolyte fuel cell or a polymer electrolyte fuel cell...wherein said separator plate or each of said separator plates comprises: an electronic conductor portion containing conductive carbon; an insulating portion surrounding said electronic conductor portion, and a third portion between said electronic conductor portion and said insulating portion, wherein said third portion comprises a mixture of a material used in said electronic conductor portion and a material used in said insulating portion, it is clear that Washington, Middleman and Tanemoto do not anticipate either of claims 1 and 16, or any claim dependent thereon.

**III. All Dependent Claims Are Allowable Because The  
Independent Claim From Which They Depend Is Allowable**

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claims 1 and 16 are patentable for the reasons set forth above, it is respectfully submitted that all pending dependent claims are also in condition for allowance.

Furthermore, with respect to claim 11, the Examiner alleges that because Tanemoto teaches that the electronic conductor portion and the insulating portion comprise a resin made of a phenol resin, epoxy resin, polyimide resin or a liquid crystal polyester resin, the reference reads upon claim 11 of the present invention, which states that the resin is polyphenylene sulfide. However, polyphenylene sulfide is neither a phenol resin, epoxy resin, polyimide resin or a liquid crystal polyester resin. As such, Tanemoto fails to disclose a separator plate for a polymer

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electrolyte fuel cell, wherein the resin having the same main molecular structure is polyphenylene sulfide. Accordingly, Tanemoto fails to anticipate claim 11 of the present invention.

**IV. Conclusion**

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication of which is respectfully solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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